

Scaled data based on original data using
LM-79-08 Approved Method: Electrical and Photometric Measurements of Solid-State
Lighting Products

Test Report Prepared for
Cooper Lighting Solutions
(formerly Eaton)

Brand: FAIL-SAFE

Report Number: P709087

Luminaire Tested: **4APN-X-30L930-UNV**

Issue Date: 09/12/2023



Test Information

Test Method: LM-79-08
Report Number: P709087
Test Lab: INNOVATION CENTER(G2)
Issue Date: 09/12/2023
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: FAIL-SAFE
Catalog Number: 4APN-X-30L930-UNV
Description: ArcMed Patient Recessed 4 FT x6 IN Fixture EXAM Light
Light Source: 3000K CCT, 90 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

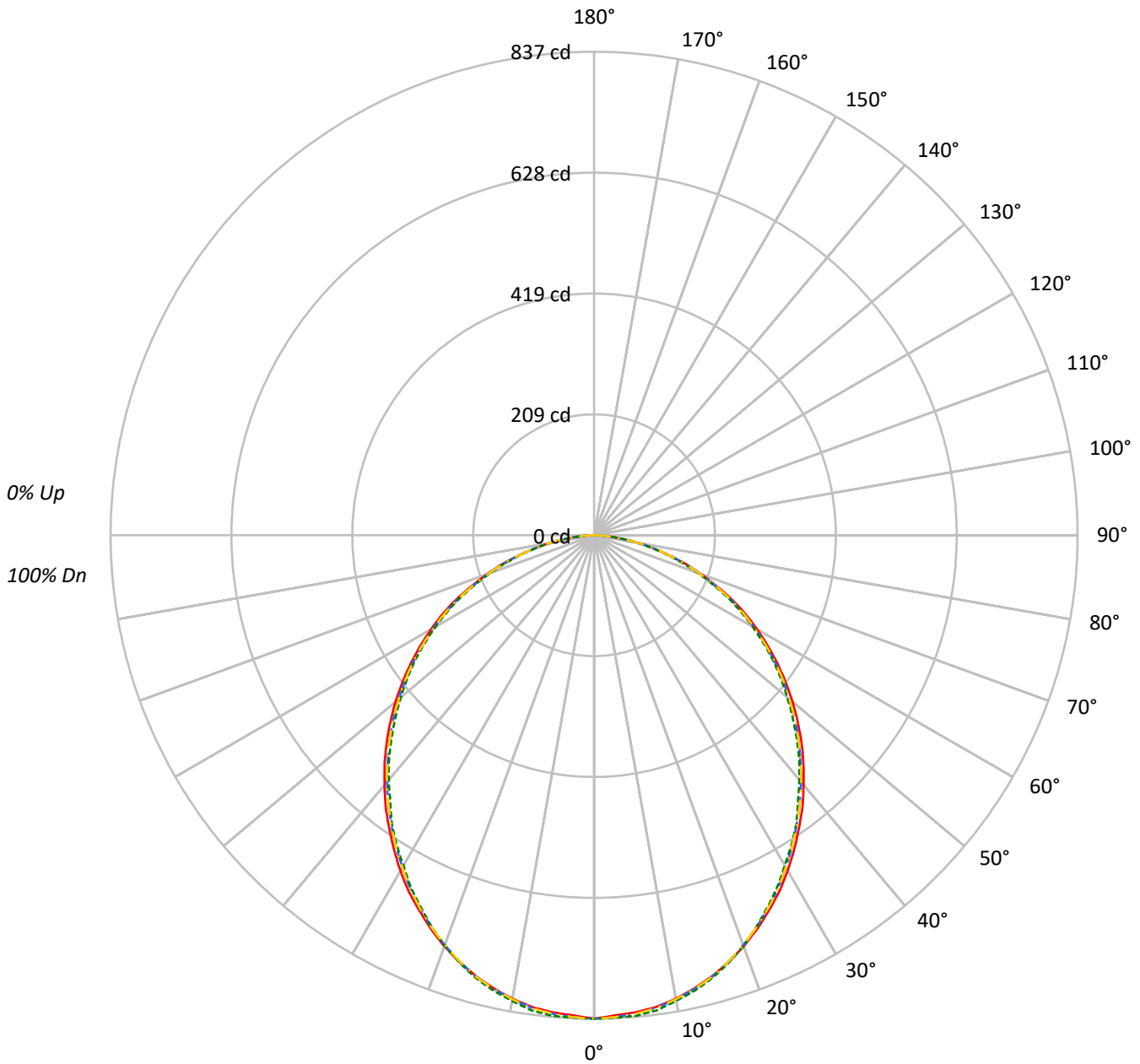
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2177.8 lumens
Efficiency: N/A
Efficacy: 67.0 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.18 / 1.3
Luminous Opening: Rectangular (W 0.29' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 32.5
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT

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Luminous Intensity Polar Plot



— 0°-180° - - 45°-225° - - - 90°-270° - · - 135°-315°



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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20				20				20				20				20				20
RC	80				70				50				30				10				0
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	50	30	10	0
RCR																					
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100	100	100	100
1	109	104	100	96	106	102	98	95	98	95	92	94	91	89	90	88	86	84	84	84	84
2	99	91	84	79	97	89	83	78	86	80	76	82	78	74	79	76	73	70	70	70	70
3	91	80	72	66	88	79	71	65	76	69	64	73	67	63	70	66	62	60	60	60	60
4	83	71	62	56	81	70	62	55	67	60	55	65	59	54	63	58	53	51	51	51	51
5	76	64	55	48	74	63	54	48	60	53	47	59	52	47	57	51	46	44	44	44	44
6	71	57	49	42	69	57	48	42	55	47	42	53	46	41	51	46	41	39	39	39	39
7	66	52	43	37	64	51	43	37	50	42	37	48	42	37	47	41	36	34	34	34	34
8	61	48	39	33	60	47	39	33	46	38	33	44	38	33	43	37	33	31	31	31	31
9	57	44	36	30	56	43	35	30	42	35	30	41	34	30	40	34	30	28	28	28	28
10	54	40	33	27	52	40	32	27	39	32	27	38	32	27	37	31	27	25	25	25	25

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°	270°
0°	7722	7722	7722	7722
5°	7677	7733	7677	7733
10°	7632	7669	7632	7669
15°	7546	7575	7546	7575
20°	7435	7426	7435	7426
25°	7293	7231	7293	7231
30°	7143	7033	7143	7033
35°	6964	6873	6964	6873
40°	6795	6659	6795	6659
45°	6627	6468	6627	6468
50°	6440	6264	6440	6264
55°	6230	6083	6230	6083
60°	6015	5846	6015	5846
65°	5757	5578	5757	5578
70°	5322	5155	5322	5155
75°	4809	4663	4809	4663
80°	4128	4017	4128	4017
85°	3133	3133	3133	3133



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	79.0	3.6
10°-20°	223.1	10.2
20°-30°	328.8	15.1
30°-40°	383.9	17.6
40°-50°	387.0	17.8
50°-60°	342.0	15.7
60°-70°	255.8	11.7
70°-80°	141.8	6.5
80°-90°	36.4	1.7
90°-100°	0.0	0.0
100°-110°	0.0	0.0
110°-120°	0.0	0.0
120°-130°	0.0	0.0
130°-140°	0.0	0.0
140°-150°	0.0	0.0
150°-160°	0.0	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-30°	630.9	29.0
0°-40°	1014.8	46.6
0°-60°	1743.8	80.1
0°-90°	2177.8	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2177.8	100.0

CANDELA DISTRIBUTION:

	0°	90°	180°	270°	360°	Flux
0°	837	837	837	837	837	
5°	829	835	829	835	829	79
15°	790	793	790	793	790	223
25°	716	710	716	710	716	330
35°	618	610	618	610	618	387
45°	508	496	508	496	508	392
55°	387	378	387	378	387	346
65°	264	256	264	256	264	260
75°	135	131	135	131	135	143
85°	30	30	30	30	30	36
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	10°	20°	30°	40°	50°	60°	70°	80°	90°	100°
0°	837.0	837.0	837.0	837.0	837.0	837.0	837.0	837.0	837.0	837.0	837.0
2.5°	831.9	836.0	840.1	839.1	836.0	834.0	835.0	835.0	836.0	836.0	836.0
5°	828.9	833.0	836.0	835.0	831.9	830.9	830.9	830.9	833.0	835.0	833.0
7.5°	823.8	826.8	829.9	828.9	825.8	824.8	824.8	825.8	827.8	829.9	827.8
10°	814.6	818.6	821.7	819.7	816.6	814.6	814.6	814.6	816.6	818.6	816.6
12.5°	803.3	806.4	809.4	808.4	805.4	803.3	803.3	803.3	805.4	807.4	805.4
15°	790.0	793.1	796.2	795.1	792.1	790.0	790.0	790.0	792.1	793.1	792.1
17.5°	774.7	777.8	780.8	778.8	774.7	772.7	772.7	772.7	774.7	775.7	774.7
20°	757.3	760.4	762.4	760.4	756.3	754.3	753.2	753.2	755.3	756.3	755.3
22.5°	737.9	740.0	742.0	740.0	735.9	733.8	732.8	731.8	732.8	733.8	732.8
25°	716.4	718.5	720.5	718.5	714.4	711.3	710.3	709.3	710.3	710.3	710.3
27.5°	695.0	696.0	698.0	695.0	690.9	687.8	686.8	685.8	686.8	686.8	686.8
30°	670.5	671.5	673.5	670.5	665.3	662.3	661.3	660.2	660.2	660.2	660.2
32.5°	644.9	646.9	649.0	644.9	639.8	636.7	635.7	634.7	635.7	635.7	635.7
35°	618.3	619.4	621.4	618.3	613.2	610.2	608.1	607.1	609.1	610.2	609.1
37.5°	592.8	593.8	594.8	591.8	586.6	583.6	581.5	580.5	579.5	579.5	579.5
40°	564.2	565.2	567.2	564.2	559.1	556.0	553.9	552.9	552.9	552.9	552.9
42.5°	536.6	537.6	538.6	535.5	530.4	527.4	525.3	524.3	525.3	525.3	525.3
45°	507.9	507.9	509.0	505.9	501.8	498.8	496.7	495.7	495.7	495.7	495.7
47.5°	478.3	479.3	480.4	477.3	473.2	470.1	468.1	466.0	466.0	466.0	466.0
50°	448.7	448.7	449.7	446.6	442.5	439.5	438.5	437.4	436.4	436.4	436.4
52.5°	418.0	419.0	420.1	417.0	413.9	410.9	408.8	407.8	407.8	407.8	407.8
55°	387.3	387.3	388.4	386.3	383.3	380.2	378.2	377.1	378.2	378.2	378.2
57.5°	356.7	357.7	358.7	355.7	352.6	349.5	348.5	347.5	347.5	347.5	347.5
60°	326.0	326.0	327.0	325.0	321.9	318.9	317.9	316.8	316.8	316.8	316.8
62.5°	295.4	295.4	296.4	294.3	291.3	288.2	287.2	286.2	286.2	286.2	286.2
65°	263.7	263.7	263.7	261.6	259.6	258.6	257.6	256.5	255.5	255.5	255.5
67.5°	228.9	228.9	230.0	227.9	225.9	224.8	223.8	222.8	221.8	221.8	221.8
70°	197.3	197.3	198.3	197.3	195.2	194.2	193.2	192.1	191.1	191.1	191.1
72.5°	166.6	166.6	166.6	165.6	164.5	163.5	162.5	161.5	160.5	160.5	160.5
75°	134.9	134.9	135.9	134.9	133.9	132.9	131.8	131.8	130.8	130.8	130.8
77.5°	105.3	106.3	107.3	106.3	105.3	104.2	103.2	103.2	102.2	102.2	102.2
80°	77.7	78.7	79.7	78.7	77.7	76.7	75.6	75.6	75.6	75.6	75.6
82.5°	52.1	53.1	54.2	53.1	52.1	52.1	51.1	51.1	51.1	51.1	51.1
85°	29.6	30.7	31.7	31.7	30.7	30.7	29.6	29.6	29.6	29.6	29.6
87.5°	11.2	12.3	13.3	13.3	12.3	12.3	12.3	12.3	12.3	12.3	12.3
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



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CANDELA DISTRIBUTION (continued):

	110°	120°	130°	140°	150°	160°	170°	180°	190°	200°	210°
0°	837.0	837.0	837.0	837.0	837.0	837.0	837.0	837.0	837.0	837.0	837.0
2.5°	835.0	835.0	834.0	836.0	839.1	840.1	836.0	831.9	836.0	840.1	839.1
5°	830.9	830.9	830.9	831.9	835.0	836.0	833.0	828.9	833.0	836.0	835.0
7.5°	825.8	824.8	824.8	825.8	828.9	829.9	826.8	823.8	826.8	829.9	828.9
10°	814.6	814.6	814.6	816.6	819.7	821.7	818.6	814.6	818.6	821.7	819.7
12.5°	803.3	803.3	803.3	805.4	808.4	809.4	806.4	803.3	806.4	809.4	808.4
15°	790.0	790.0	790.0	792.1	795.1	796.2	793.1	790.0	793.1	796.2	795.1
17.5°	772.7	772.7	772.7	774.7	778.8	780.8	777.8	774.7	777.8	780.8	778.8
20°	753.2	753.2	754.3	756.3	760.4	762.4	760.4	757.3	760.4	762.4	760.4
22.5°	731.8	732.8	733.8	735.9	740.0	742.0	740.0	737.9	740.0	742.0	740.0
25°	709.3	710.3	711.3	714.4	718.5	720.5	718.5	716.4	718.5	720.5	718.5
27.5°	685.8	686.8	687.8	690.9	695.0	698.0	696.0	695.0	696.0	698.0	695.0
30°	660.2	661.3	662.3	665.3	670.5	673.5	671.5	670.5	671.5	673.5	670.5
32.5°	634.7	635.7	636.7	639.8	644.9	649.0	646.9	644.9	646.9	649.0	644.9
35°	607.1	608.1	610.2	613.2	618.3	621.4	619.4	618.3	619.4	621.4	618.3
37.5°	580.5	581.5	583.6	586.6	591.8	594.8	593.8	592.8	593.8	594.8	591.8
40°	552.9	553.9	556.0	559.1	564.2	567.2	565.2	564.2	565.2	567.2	564.2
42.5°	524.3	525.3	527.4	530.4	535.5	538.6	537.6	536.6	537.6	538.6	535.5
45°	495.7	496.7	498.8	501.8	505.9	509.0	507.9	507.9	507.9	509.0	505.9
47.5°	466.0	468.1	470.1	473.2	477.3	480.4	479.3	478.3	479.3	480.4	477.3
50°	437.4	438.5	439.5	442.5	446.6	449.7	448.7	448.7	448.7	449.7	446.6
52.5°	407.8	408.8	410.9	413.9	417.0	420.1	419.0	418.0	419.0	420.1	417.0
55°	377.1	378.2	380.2	383.3	386.3	388.4	387.3	387.3	387.3	388.4	386.3
57.5°	347.5	348.5	349.5	352.6	355.7	358.7	357.7	356.7	357.7	358.7	355.7
60°	316.8	317.9	318.9	321.9	325.0	327.0	326.0	326.0	326.0	327.0	325.0
62.5°	286.2	287.2	288.2	291.3	294.3	296.4	295.4	295.4	295.4	296.4	294.3
65°	256.5	257.6	258.6	259.6	261.6	263.7	263.7	263.7	263.7	263.7	261.6
67.5°	222.8	223.8	224.8	225.9	227.9	230.0	228.9	228.9	228.9	230.0	227.9
70°	192.1	193.2	194.2	195.2	197.3	198.3	197.3	197.3	197.3	198.3	197.3
72.5°	161.5	162.5	163.5	164.5	165.6	166.6	166.6	166.6	166.6	166.6	165.6
75°	131.8	131.8	132.9	133.9	134.9	135.9	134.9	134.9	134.9	135.9	134.9
77.5°	103.2	103.2	104.2	105.3	106.3	107.3	106.3	105.3	106.3	107.3	106.3
80°	75.6	75.6	76.7	77.7	78.7	79.7	78.7	77.7	78.7	79.7	78.7
82.5°	51.1	51.1	52.1	52.1	53.1	54.2	53.1	52.1	53.1	54.2	53.1
85°	29.6	29.6	30.7	30.7	31.7	31.7	30.7	29.6	30.7	31.7	31.7
87.5°	12.3	12.3	12.3	12.3	13.3	13.3	12.3	11.2	12.3	13.3	13.3
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



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CANDELA DISTRIBUTION (continued):

	220°	230°	240°	250°	260°	270°	280°	290°	300°	310°	320°
0°	837.0	837.0	837.0	837.0	837.0	837.0	837.0	837.0	837.0	837.0	837.0
2.5°	836.0	834.0	835.0	835.0	836.0	836.0	836.0	835.0	835.0	834.0	836.0
5°	831.9	830.9	830.9	830.9	833.0	835.0	833.0	830.9	830.9	830.9	831.9
7.5°	825.8	824.8	824.8	825.8	827.8	829.9	827.8	825.8	824.8	824.8	825.8
10°	816.6	814.6	814.6	814.6	816.6	818.6	816.6	814.6	814.6	814.6	816.6
12.5°	805.4	803.3	803.3	803.3	805.4	807.4	805.4	803.3	803.3	803.3	805.4
15°	792.1	790.0	790.0	790.0	792.1	793.1	792.1	790.0	790.0	790.0	792.1
17.5°	774.7	772.7	772.7	772.7	774.7	775.7	774.7	772.7	772.7	772.7	774.7
20°	756.3	754.3	753.2	753.2	755.3	756.3	755.3	753.2	753.2	754.3	756.3
22.5°	735.9	733.8	732.8	731.8	732.8	733.8	732.8	731.8	732.8	733.8	735.9
25°	714.4	711.3	710.3	709.3	710.3	710.3	710.3	709.3	710.3	711.3	714.4
27.5°	690.9	687.8	686.8	685.8	686.8	686.8	686.8	685.8	686.8	687.8	690.9
30°	665.3	662.3	661.3	660.2	660.2	660.2	660.2	660.2	661.3	662.3	665.3
32.5°	639.8	636.7	635.7	634.7	635.7	635.7	635.7	634.7	635.7	636.7	639.8
35°	613.2	610.2	608.1	607.1	609.1	610.2	609.1	607.1	608.1	610.2	613.2
37.5°	586.6	583.6	581.5	580.5	579.5	579.5	579.5	580.5	581.5	583.6	586.6
40°	559.1	556.0	553.9	552.9	552.9	552.9	552.9	552.9	553.9	556.0	559.1
42.5°	530.4	527.4	525.3	524.3	525.3	525.3	525.3	524.3	525.3	527.4	530.4
45°	501.8	498.8	496.7	495.7	495.7	495.7	495.7	495.7	496.7	498.8	501.8
47.5°	473.2	470.1	468.1	466.0	466.0	466.0	466.0	466.0	468.1	470.1	473.2
50°	442.5	439.5	438.5	437.4	436.4	436.4	436.4	437.4	438.5	439.5	442.5
52.5°	413.9	410.9	408.8	407.8	407.8	407.8	407.8	407.8	408.8	410.9	413.9
55°	383.3	380.2	378.2	377.1	378.2	378.2	378.2	377.1	378.2	380.2	383.3
57.5°	352.6	349.5	348.5	347.5	347.5	347.5	347.5	347.5	348.5	349.5	352.6
60°	321.9	318.9	317.9	316.8	316.8	316.8	316.8	316.8	317.9	318.9	321.9
62.5°	291.3	288.2	287.2	286.2	286.2	286.2	286.2	286.2	287.2	288.2	291.3
65°	259.6	258.6	257.6	256.5	255.5	255.5	255.5	256.5	257.6	258.6	259.6
67.5°	225.9	224.8	223.8	222.8	221.8	221.8	221.8	222.8	223.8	224.8	225.9
70°	195.2	194.2	193.2	192.1	191.1	191.1	191.1	192.1	193.2	194.2	195.2
72.5°	164.5	163.5	162.5	161.5	160.5	160.5	160.5	161.5	162.5	163.5	164.5
75°	133.9	132.9	131.8	131.8	130.8	130.8	130.8	131.8	131.8	132.9	133.9
77.5°	105.3	104.2	103.2	103.2	102.2	102.2	102.2	103.2	103.2	104.2	105.3
80°	77.7	76.7	75.6	75.6	75.6	75.6	75.6	75.6	75.6	76.7	77.7
82.5°	52.1	52.1	51.1	51.1	51.1	51.1	51.1	51.1	51.1	52.1	52.1
85°	30.7	30.7	29.6	29.6	29.6	29.6	29.6	29.6	29.6	30.7	30.7
87.5°	12.3	12.3	12.3	12.3	12.3	12.3	12.3	12.3	12.3	12.3	12.3
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



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CANDELA DISTRIBUTION (continued):

	330°	340°	350°	360°
0°	837.0	837.0	837.0	837.0
2.5°	839.1	840.1	836.0	831.9
5°	835.0	836.0	833.0	828.9
7.5°	828.9	829.9	826.8	823.8
10°	819.7	821.7	818.6	814.6
12.5°	808.4	809.4	806.4	803.3
15°	795.1	796.2	793.1	790.0
17.5°	778.8	780.8	777.8	774.7
20°	760.4	762.4	760.4	757.3
22.5°	740.0	742.0	740.0	737.9
25°	718.5	720.5	718.5	716.4
27.5°	695.0	698.0	696.0	695.0
30°	670.5	673.5	671.5	670.5
32.5°	644.9	649.0	646.9	644.9
35°	618.3	621.4	619.4	618.3
37.5°	591.8	594.8	593.8	592.8
40°	564.2	567.2	565.2	564.2
42.5°	535.5	538.6	537.6	536.6
45°	505.9	509.0	507.9	507.9
47.5°	477.3	480.4	479.3	478.3
50°	446.6	449.7	448.7	448.7
52.5°	417.0	420.1	419.0	418.0
55°	386.3	388.4	387.3	387.3
57.5°	355.7	358.7	357.7	356.7
60°	325.0	327.0	326.0	326.0
62.5°	294.3	296.4	295.4	295.4
65°	261.6	263.7	263.7	263.7
67.5°	227.9	230.0	228.9	228.9
70°	197.3	198.3	197.3	197.3
72.5°	165.6	166.6	166.6	166.6
75°	134.9	135.9	134.9	134.9
77.5°	106.3	107.3	106.3	105.3
80°	78.7	79.7	78.7	77.7
82.5°	53.1	54.2	53.1	52.1
85°	31.7	31.7	30.7	29.6
87.5°	13.3	13.3	12.3	11.2
90°	0.0	0.0	0.0	0.0

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